

Baltic ForBio, WP 2, GA 2.4

Information about Demonstration Site and Demonstration of Early Thinning for Wood Fuel/Energy

Country	<i>Finland</i>
Region	<i>North Karelia</i>
Demonstration Site ID	<i>Forest Estate 167-435-40-18</i>
Year/Date of the Thinning	Harvesting Plan 2020 but not yet performed
Topic	<i>Forest grows in two separate sites where the upper one is birch dominated and the lower one is coniferous species dominated site. The need for thinning operations is obvious in the forest site. Due to the forest structure the mixed forest species growing is appropriate. The site will be harvested for the future forest growth with harvester & forwarder configuration based on the specialized energy wood technology.</i>

Information about the Forest Stand

General Information

Forest Stand ID	<i>Forest Estate 167-435-40-18</i>
Area [ha]	15 hectares
Age [years]	20 years

Tree Species

Tree species in mixed stands (%): Birch 70%, spruce 20% and 10% pine and mountain ash (Sorbus aucuparia).

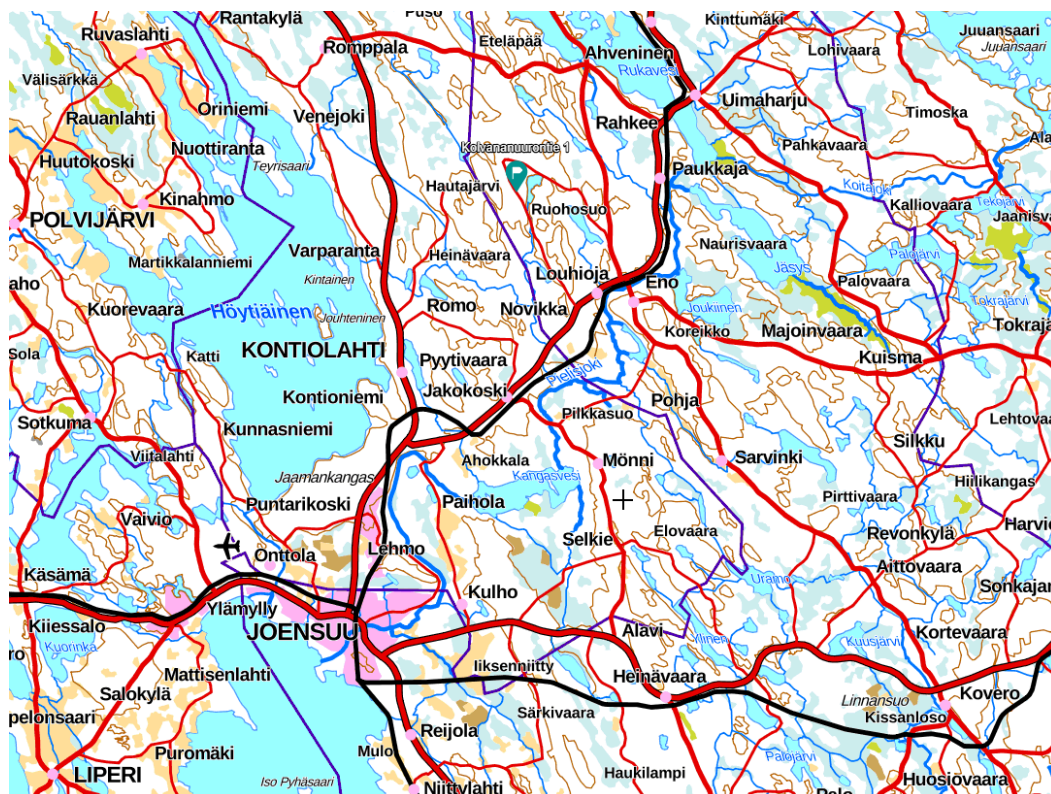
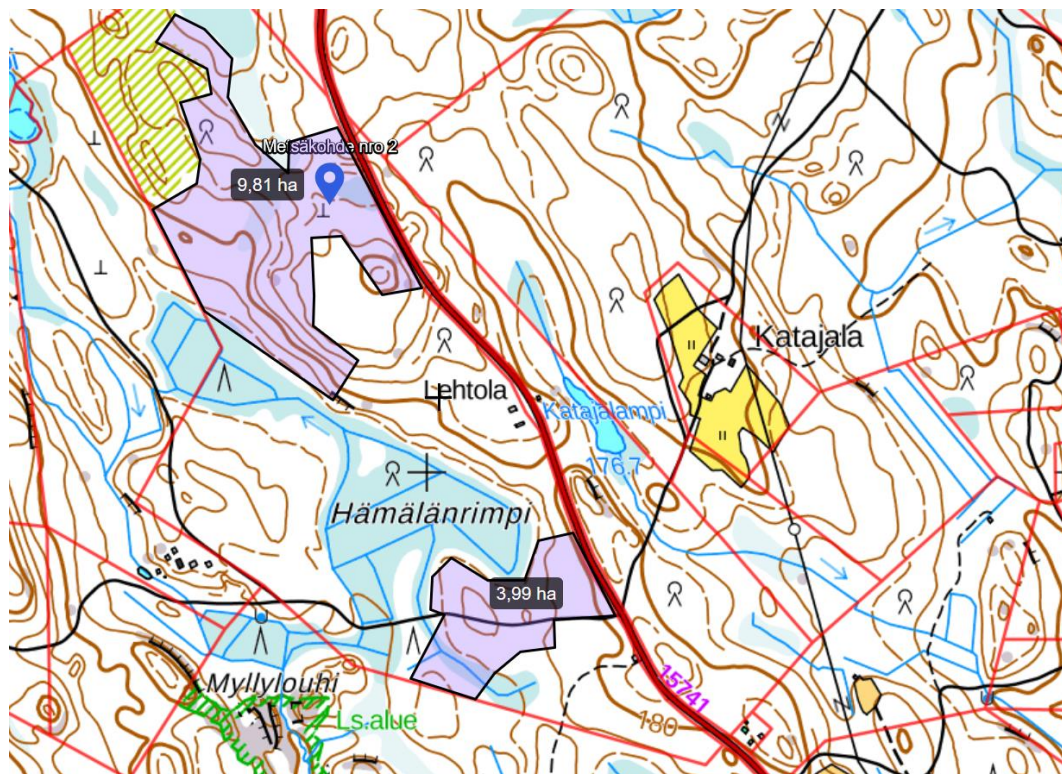
Terrain and Soil Conditions

Terrain in the slope, fresh soil growing blueberries and covered with moss, suitable for the summer time harvesting operations, in the lower part of the site the swampy ditched more area starts from the edge of the harvest site, the terrain height at the level of 175-205 meters over the sea surface.

Map with the Location of the Demonstration Site

Location of the forest site (Kolvananuorontie 1, Joensuu):

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Stand Description Before Thinning

Diameter at breast height (arithmetic mean) [cm]	15
Tree height [m]	14
Number of trees per hectare [N/ha]	3,400
Volume [m ³ /ha]	230

Objectives of Forest Management

Brief description:

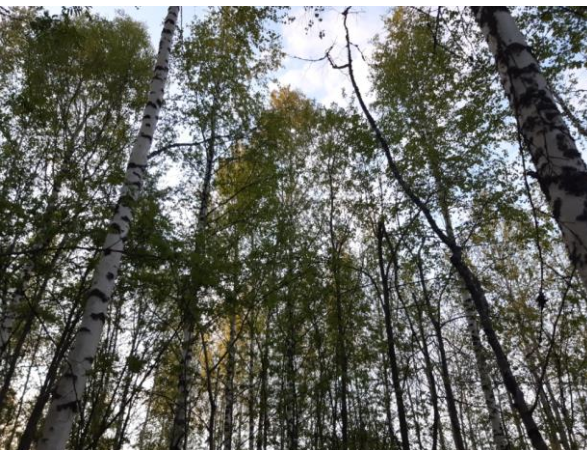
- *The general objectives of forest management in this forest stand (midterm perspective): To achieve the good growth state for the forest site.*
- *The last measures of forest management that have been conducted in this stand (if any): No information.*
- *The objectives connected to the planned early thinning (planned effects on the forest stand, wood production,): To achieve the normal growth speed for the unmanaged forest after energy wood harvesting as thinning operation.*

Pictures *Before* Thinning

Six pictures of the forest stand before the thinning (photos taken 2.6.2020):



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Stand Description After Thinning (site is not yet harvested):

Dbh (arithmetic mean) [cm]	
Tree height [m]	
Number of trees per hectare [N/ha]	
Volume [m ³ /ha]	

Pictures *After* Thinning

Pictures of the forest stand directly after thinning:

Damages to Trees and Soil

Description of the damages to trees and soil caused by harvesting and forwarding procedure:

Pictures describing the damages to the soil and tree stems.

Thinning Method

Description of Working Process:

The main characteristics of the applied harvesting methods and the expected advantages:

Machines (incl. pictures):

The forest machines used for harvesting and forwarding with their most important/notable technical features and the reasons why they were chosen for the demonstration.

Attachments:

- Map with forest stand (general map/detailed map)
- Pictures of the forest stand before thinning
- Pictures of the forest stand after thinning
- Pictures of the machines, see the video in Luke Youtube Channel